REMARKS

This Response responds to the Office Action dated May 27, 2005 in which the Examiner rejected claims 1-21 under 35 U.S.C. §103.

Claims 1, 3, 8, 15, 19 and 20 were rejected under 35 U.S.C. §103 as being unpatentable over *Fischer* (U.S. Patent No. 6,470,387) in view of *Yacoub* (U.S. Patent No. 6,552,813).

Applicant respectfully traverses the Examiner's rejection of the claims under 35 U.S.C. §103. The claims have been reviewed in light of the Office Action, and for reasons which will be set forth below, applicant respectfully requests the Examiner withdraws the rejection to the claims and allows the claims to issue.

Fischer appears to disclose locating networked devices based on user usage of those devices. (col. 1, lines 8-9) A tool for locating a device on a network includes software for capturing information from the network or from devices on the network. The captured information includes user information relating to a user or users that use or reference the device being located. The captured user information is cross referenced with a database having user location information. The user location information is then referenced to determine a physical location of the device. Typically, the physical location of the device is in the same general area as its users. A preferred method of locating a device on a network includes identifying user information pertaining to a user or users that use or have used the device; determining a reference location of the user or users based on the user information; and determining a location of the device based on the reference location of the user or users. (col. 1, lines 52-67) The asset locator 12 as embodied in computer 15 provides a mechanism for locating resources on network 10 since each resource

(asset) 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70 may be located at a completely different location relative to each other resource on the network. (col. 3, lines 36-40) Importantly, the asset locator 12 provides a means for locating such resources, and especially for locating peripheral devices such as printers 50, 55, and 70, fax 60, and copier 65 in environments where distributed locations of the devices may be diverse. Generally speaking, asset locator 12 determines an asset's location by identifying user information pertaining to a user or users that use or have used the asset, and then determining reference locations of the users based on the user information. The collection of reference locations of the users suggests the location of the asset because, typically, an asset is located near the user or users that use the asset. For example, a user typically submits print jobs to a network printer that is physically located near to or in the general area of the user. (col. 3, line 60 through col. 4, line 7) Referring now to FIG. 3, a block diagram depicts a database record 205 for providing and enabling cross referencing of user information and device information associated with network 10. (col. 5, lines 24-27) Importantly, however, once asset locator 12 identifies the user location 225 from a respectively matched record 205, the location of the asset being tracked may also be determined. Namely, the location of the user strongly suggests the location of the asset because the asset is typically located near the user (or users) that use the asset. Asset locator 12 thus reports this location 225 or, significantly, further refines the actual probable location of the asset by identifying other users that are using and/or have used the asset as will be further described herein. Thus, referring now to FIG. 4, a block diagram depicts a database record 305 for identifying an asset's physical location. Network asset record 305 is maintained and stored in a database within asset locator 12, or within a separate

database such as database 14, either in memory and/or in non-volatile storage on computer 15, or on another network device or plurality of devices. Under principles of the invention, asset locator 12 creates and maintains a separate record 305 for every asset 20, 25, 30, 35, 40, 45, 50, 55, 60, 65 and 70 on network 10. Network asset record 305 includes information fields such as destination device address field 310 and/or peripheral ID field 315 for identifying the particular device on network 10 with which record 305 is associated. Importantly, record 305 further includes one or more user location fields 320, 325, 330, also referred to as "possible device location" fields, for ultimately identifying a probable physical location of the device identified by the record. Each user location field 320, 325, 330 identifies a known location of a unique user that has used this device. Thus, if three users have used this device, the location associated with each of those users as extracted from the user location field 225 of user information record 205 is stored in a respective field 320, 325, 330. When other users are detected as using this device of record 305, then those respective user locations are similarly added to record 305. In a preferred embodiment, fields 320, 325, 330 are dynamically allocated for each new user location encountered, although a fixed length record may similarly be employed. Ellipses 335 illustrate that there may be more user location fields, similar to 320, 325 and 330, that become part of record 305 as needed and/or as dynamically allocated. Again, the purpose of user location fields 320, 325, 330 is to enable a determination of a probable location of the device from a collection of possible locations. In other words, given a plurality of known user locations associated with a device record 305, the probable physical location of the device becomes more ascertainable through conventional statistical analysis, plotting techniques, and/or other extrapolation

measures. To this regard, in a preferred embodiment, each user location field 320, 325, 330 also includes (or references) an associated "usage" field or parameter 322, 327, 332, respectively, that identifies how many times or what percentage of total times a given user (identified by that user location 320, 325, 330) has referenced the given device. In this context, the probable physical location of the device may be more accurately identified. For example, a collective set of users that use a peripheral device the most are probably located nearest to that device. (col. 6, line 17 through col. 7, line 8) So, referring to FIG. 5, once a query for an asset location is initiated 410, if a network asset record 305 is already updated 415 in database 14, then the asset's possible physical locations 320, 325, 330 and usage data 322, 327, 332 are referenced 425. Next, the probable location of the asset is calculated 430. This method may be as simple as selecting the possible device location field 320 with the highest usage number 322, or as complicated as statistically calculating and plotting each of the possible device locations and usage numbers to determine a most probable location of the asset. In either case, once the calculation is complete, the asset's probable location is reported 435. In short, the calculated probable location 430, 435 is simply a determination based on user usage of the device because the device is typically located near to or in the general area of the user or users' locations. Asset locator 12 reports the probable asset's location by displaying the location on computer 15, by printing it, by storing it, or by otherwise manipulating the reported data as needed to enable tracking of that device. (col. 7, lines 22-40) If the user location (i.e., possible device location) already exits in record 305, then the respective usage counter 322, 327, 332 is simply incremented or updated accordingly. (col. 8, lines 30-33) The parameters for determining when sufficient

user information is gathered for any given device are denoted simply by system or design choice. For example, a threshold may be set for the number of possible device location fields 320, 325, 330 or usage counts established. Or, a threshold may be set for the number of times the looping process 535, 505 is executed. In any case, once sufficient asset and user information is captured 535, then the network asset record 305 is complete for the given asset (i.e., queried from FIG. 5) and/or for all known assets on network 10 (i.e., in the event of constant background process execution). Obviously, however, further monitoring, capturing, and/or updating of data for the assets on network 10 will continue to occur as needed with the method of FIG. 6 executing as a background process. (col. 8, lines 40-54)

Thus, *Fischer* merely discloses identifying the user location as the probable location of an asset (column 6, lines 20-22, lines 59-61). Nothing in *Fischer* shows, teaches or suggests a) storing distance information from a computer to each printer as claimed in claim 1 (and claims 6, 9 and 14) or b) obtaining distance information from each computer to each printer as claimed in claim 8. Rather, *Fischer* merely discloses identifying a user location which suggests the probable location of an asset.

Additionally, *Fischer* merely discloses determining an asset's location by identifying users that have used the asset and calculating and plotting the possible device locations to determine the most probable location of the asset (column 1, lines 64-66, column 3, line 65 through column 4, line 2, column 7, lines 27-31). Nothing in *Fischer* shows, teaches or suggests a) compensating distance information according to the number of times each printer receives a printing job as claimed in claim 1 (and claims 6, 9 and 14) or b) compensating the obtained distance

information according to the number of times each printer receives a printing job as claimed in claim 8. Rather, *Fischer* merely discloses determining an asset's location by identifying the users that have used the asset.

Finally, *Fischer* merely discloses usage frequency is recorded on usage counters (column 8, lines 30-33) and identifying an asset location based on the usage counter which is most frequently used (column 8, lines 22-40). In other words, *Fischer* merely discloses identifying a user relative to a device in order to obtain a location corresponding to the user, i.e., the usage frequency information is used to identify the user/user location. Thus, nothing in *Fischer* shows, teaches or suggests compensating the distance information according to the number of times each printer receives a printer job as claimed in claims 1 and 8. Rather, *Fischer* merely discloses using the usage frequency to obtain the identity of a user. Thus, nothing in *Fischer* shows, teaches or suggests obtaining distance information between devices, storing the distance information or compensating the distance information using user frequency as claimed in claims 1 and 8.

Yacoub appears to disclose networking of printers. (col. 1, lines 8-9) A virtual printer, as part of a client generating a print job, receives preferences from a user regarding the print job such as image quality and/or speed. The virtual printer automatically determines which printer of the printers on the network comply with the print job preferences. The virtual printer then selects an appropriate printer which complies with the preferences and is located physically near the user/client. (col. 2, lines 8-14) The virtual printer/server will access a coordinate mapped list of the physical locations of each printer. The topmost ranked printer according to speed and quality will be indexed with the coordinate (X_1, Y_1). The user or workstation

generating the print job can also be identified by a coordinate location by accessing a similar coordinate map list for workstations, and has a coordinate (X_2, Y_2). The distance between the topmost ranked printer and the user/workstation is determined by server/virtual printer computing the formula $\sqrt{(X_2 - X_1)^2 + (Y_2 - Y_1)^2}$. If the second ranked printer is determined by the virtual printer/server to be equally or closely capable with the topmost ranked printer, then the distance of the second ranked printer (coordinate (X_3, Y_3)) is determined according to the formula $\sqrt{(X_3 - X_2)^2 + (Y_3 - Y_2)^2}$. This distance is compared with the distance from the user to the topmost ranked printer to determine which of the two printers is most "appropriate" printer complying with the user's speed/quality preferences and closer than other printers of similar capability. Each user or workstation may have a profile stored in the server or virtual printer which enables the server/virtual printer to decide how important distance to the printer is compared to speed/quality preferences. The case logic and artificial intelligence involved in determining which printer is most appropriate involves a combination of speed/quality and other job-related preferences with physical location (distance from the user), and can be implemented in a variety of methods and algorithms. (col. 5, line 64 through col. 6, line 24)

Thus, *Yacoub* merely discloses storing a profile to enable a server to determine how important distance to a printer is compared to speed/quality preferences. (col. 6, lines 16-19) In other words, *Yacoub* merely discloses comparing distance information and quality information in order to select a printer. Nothing in *Yacoub* shows, teaches or suggests compensating distance information according to a number of times each printer received a printing job as claimed in

claims 1 and 8 (and claims 6, 9 and 14). Rather, *Yacoub* merely discloses using distance and quality information to select the printer.

A combination of *Fischer* and *Yacoub* would merely suggest determining an asset's location based upon the highest usage number by a user as taught by *Fischer* while determining how important distance to a printer is compared to speed/quality as taught by *Yacoub*. Thus, nothing in the combination of the references shows, teaches or suggests a) compensating distance information as claimed in claims 1 and 8 and b) compensating the distance information according to the number of times each printer received a printing job as claimed in claims 1 and 8. Therefore, applicant respectfully requests the Examiner withdraws the rejection to claims 1 and 8 under 35 U.S.C. §103.

Claims 3, 15, 19 and 20 recite additional features. Applicant respectfully submits that claims 3, 15, 19 and 20 would not have been obvious within the meaning of 35 U.S.C. §103 over *Fischer* and *Yacoub* at least for the reasons as set forth above. Therefore, applicant respectfully requests the Examiner withdraws the rejection to claims 3, 15, 19 and 20 under 35 U.S.C. §103.

Claims 2, 6, 7 and 8 were rejected under 35 U.S.C. §103 as being unpatentable over *Fischer* and *Yacoub* and further in view of *Kageyama et al* (U.S. Patent No. 5,625,757).

Applicant respectfully traverses the Examiner's rejection of the claims under 35 U.S.C. §103. The claims have been reviewed in light of the Office Action, and for reasons which will be set forth below, applicant respectfully requests the Examiner withdraws the rejection to the claims and allows the claims to issue.

As discussed above, *Fischer* is merely directed to determining an asset location based upon the location of a user while *Yacoub* is merely directed to selecting a printer based upon distance to the printer and speed/quality preferences. Nothing in the references taken singularly or in combination show, teach or suggest a) obtaining distance information from each computer to each printer, b) compensating distance information and c) compensating according to the number of times each printer receives a printing job as claimed in claim 6.

Kageyama et al appears to disclose in FIG. 1 a construction of a printing system. The printing system comprises: terminal equipment (11, 12, 13; hereinafter, they are generally referred to as clients) such as workstation, personal computer, word processor, and the like for requesting a printing; a plurality of printers (1A, 1B, 17, 18, 19, etc.) which can be shared by the clients; one or more printer/spooler control servers (15, 16) for controlling the printing by the printers; and a distributed printing management server 14. (col. 14, lines 38-46) When there are a plurality of decided physical printers, the specification adequate printer retrieving unit adds the orders to those printers in accordance with the print speed of the printer and display. When the print speeds are equal, the printers are displayed in accordance with the registration order. It is also possible to add the orders in consideration of an amount of jobs which are outputted to each printer or a distance from the user to each printer in addition to the print speeds. In such a case, the user can easily select the desired printer. (col. 24, lines 26-35)

Thus, *Kageyama et al* merely discloses displaying printers on a display in accordance with a distance from the user to each printer so that a user can select a desired printer. (col. 24, lines 26-35) Nothing in *Kageyama et al* shows, teaches or

suggests setting up an order of priority for printers based upon **compensated** distance information as claimed in claim 6. Rather, *Kageyama et al* merely discloses displaying printers based upon distance from a user.

A combination of *Fischer*, *Yacoub* and *Kageyama et al* would merely suggest to determine an asset location based upon a user location as taught by *Fischer*, using distance and quality in order to select a printer as taught by *Yacoub* and to display a printer based upon distance from a user as taught by *Kageyama et al*. Thus, nothing in the combination of the references shows, teaches or suggests a) compensating distance information, b) compensating based upon a number of times each printer receives a printing job and c) setting up an order of priority based upon compensated distance information as claimed in claim 6. Therefore, applicant respectfully requests the Examiner withdraws the rejection to claim 6 under 35 U.S.C. §103.

Claims 2, 7 and 18 recite additional features. Applicant respectfully submits that claims 2, 7 and 18 would not have been obvious within the meaning of 35 U.S.C. §103 over *Fischer, Yacoub* and *Kageyama et al* at least for the reasons as set forth above. Therefore, applicant respectfully requests the Examiner withdraws the rejection to claims 2, 7 and 18 under 35 U.S.C. §103.

Claims 4 and 5 were rejected under 35 U.S.C. §103 as being unpatentable over *Kageyama et al* in view of *Fischer*.

Applicant respectfully traverses the Examiner's rejection of the claims under 35 U.S.C. §103. The claims have been reviewed in light of the Office Action, and for reasons which will be set forth below, applicant respectfully requests the Examiner withdraws the rejection to the claims and allows the claims to issue.

As discussed above, *Kageyama et al* merely discloses displaying the available printers based upon distance to a user. Nothing in *Kageyama et al* shows, teaches or suggests setting up an order of priority based upon distance between each printer and computer and usage frequency as claimed in claims 4 and 5. Rather, *Kageyama et al* merely discloses displaying the available printers based upon distance to a user.

Additionally, *Kageyama et al* merely discloses a user selects a desired printer (column 24, lines 34-35). Thus, nothing in *Kageyama et al* shows, teaches or suggests a selection unit for automatically selecting a printer based on the order of priority set up as claimed in claim 5. Rather, *Kageyama et al* teaches away from the claimed invention since the user selects the desired printer.

As discussed above, *Fischer* merely discloses determining the location of an asset based upon the location of a user. Nothing in *Fischer* shows, teaches or suggests setting up priority based upon distance and usage frequency as claimed in claims 4 and 5. Rather, *Fischer* merely discloses a usage counter which is updated and used to determine an asset's location.

The combination of *Kageyama et al* and *Fischer* would merely suggest displaying a plurality of available printers based upon distance from a user as taught by *Kageyama et al* and to determine the location of the asset based upon usage as taught by *Fischer*. Therefore, nothing in the combination of the references shows, teaches or suggests a) setting up an order of priority based upon distance and usage frequency as claimed in claims 4 and 5 and b) a selection unit for automatically selecting a printer based upon the order of priority set up as claimed in claim 5.

Therefore, applicant respectfully requests the Examiner withdraws the rejection to claims 4 and 5 under 35 U.S.C. §103.

Claims 16 and 17 were rejected under 35 U.S.C. §103 as being unpatentable over *Kageyama et al* and *Fischer* in view of *Yacoub*.

Applicant respectfully traverses the Examiner's rejection of the claims under 35 U.S.C. §103. The claims have been reviewed in light of the Office Action, and for reasons which will be set forth below, applicant respectfully requests the Examiner withdraws the rejection to the claims and allows the claims to issue.

As discussed above, since nothing in primary references to *Kageyama et al* and *Fischer* shows, teaches or suggests the primary features as claimed in claims 4 and 5, applicant respectfully submits that the combination of the primary references with the secondary reference to *Yacoub* would not overcome the deficiencies of the primary references. Therefore, applicant respectfully requests the Examiner withdraws the rejection to claims 16 and 17 under 35 U.S.C. §103.

Claims 9-10, 12-14 and 21 were rejected under 35 U.S.C. §103 as being unpatentable over *Yacoub* in view of *Fischer*.

Applicant respectfully traverses the Examiner's rejection of the claims under 35 U.S.C. §103. The claims have been reviewed in light of the Office Action, and for reasons which will be set forth below, applicant respectfully requests the Examiner withdraws the rejection to the claims and allows the claims to issue.

As discussed above, *Yacoub* merely discloses allowing a server to decide how important distance to a printer is compared to speed/quality preferences. Nothing in *Yacoub* shows, teaches or suggests compensating a physical distance according to a frequency of information exchange as claimed in claims 9 and 14.

Rather, *Yacoub* merely discloses enabling a server to decide how important distance to a printer is compared to speed/quality preferences.

As discussed above, *Fischer* merely discloses determining a probable location of a device from a collection of possible user locations. Nothing in *Fischer* shows, teaches or suggests storing position information and compensating a physical distance based upon the position information according to a frequency of information exchange as claimed in claims 9 and 14. Rather, *Fischer* merely discloses identifying how many times a given user has referenced a given device and using the user position to identify a probable location of the device (column 6, line 59 through column 7, line 8).

The combination of *Yacoub* and *Fischer* would merely suggest to enable a server to decide the importance of distance to a printer compared to speed/quality as taught by *Yacoub* and to determine a probable location of a device by determining a user location which uses the device the most as taught by *Fischer*. Therefore, nothing in the combination of the references shows, teaches or suggests a) compensating a physical distance and b) compensating position information according to a frequency of information exchange as claimed in claims 9 and 14. Therefore, applicant respectfully requests the Examiner withdraws the rejection to claims 9 and 14 under 35 U.S.C. §103.

Claims 10, 12-13 and 21 recite additional features. Applicant respectfully submits that claims 10, 12-13 and 21 would not have been obvious within the meaning of 35 U.S.C. §103 over *Yacoub* and *Fischer* at least for the reasons as set forth above. Therefore, applicant respectfully requests the Examiner withdraws the rejection to claims 10, 12, 13 and 21 under 35 U.S.C. §103.

Claim 11 was rejected under 35 U.S.C. §103 as being unpatentable over *Yacoub* and *Fischer* and further in view of *Dmitri et al* (U.S. Patent No. 6,351,685).

Applicant respectfully traverses the Examiner's rejection of the claim under 35 U.S.C. §103. The claim has been reviewed in light of the Office Action, and for reasons which will be set forth below, applicant respectfully requests the Examiner withdraws the rejection to the claim and allows the claim to issue.

As discussed above, since nothing in *Yacoub* and *Fischer* shows, teaches or suggests the primary features as claimed in claim 9, applicant respectfully submits that the combination of the primary references with the secondary reference to *Dmitri et al* would not overcome the deficiencies of the primary reference. Therefore, applicant respectfully requests the Examiner withdraws the rejection to claim 11 under 35 U.S.C. §103.

The prior art of record, which is not relied upon, is acknowledged. The references taken singularly or in combination do not anticipate or make obvious the claimed invention.

Thus it now appears that the application is in condition for reconsideration and allowance. Reconsideration and allowance at an early date are respectfully requested.

If for any reason the Examiner feels that the application is not now in condition for allowance, the Examiner is respectfully requested to contact, by telephone, the applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed within the currently set shortened statutory period, applicant respectfully petitions for an appropriate extension of time.

The fees for such extension of time may be charged to our Deposit Account No. 02-4800.

In the event that any additional fees are due with this paper, please charge our Deposit Account No. 02-4800.

Respectfully submitted,

BUCHANAN INGERSOLL PC

Date: August 26, 2005

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